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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
Division of Economic Information

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THE CONSUMER
AND THE
STANDARDIZATION OF FARM PRODUCTS

Compiled by Caroline B. Sherman,
Associate Agricultural Economist

Washington, D. C.
Revised October 1935

The illustrations used in this pamphlet are selected from panel displays, in color, which are lent for short periods to responsible organizations. In addition to those here shown in black and white, a full display contains panels relating to the grade labeling of poultry, lamb, and veal. The displays are lent as a whole or in part. They are available in two sizes: 30 x 40 and 18 x 20 inches.

THE CONSUMER AND THE STANDARDIZATION OF FARM PRODUCTS

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Housekeepers in increasing numbers are asking how they can use the Federal standards for food products when they are doing the marketing for their families, and managers of cafeterias and dining rooms, who buy in larger quantities, seem to be even more interested in using these standards.

Federal standards for farm products as a rule have first been worked out from the producers' end of the marketing process. Consumers have been kept ever in mind but only within recent years has it seemed practicable to bring the work to the consumers in tangible and concrete form. Even now, the products on which this has been accomplished are few in number but they make at least a promising list.

Much as we may wish, theoretically, that all standardization work would carry through to the consumers, the fact that many of the lines do not yet reach that far limits the consumers' study of standards for practical use to a reasonable task. It is difficult for housekeepers to use standards that were not designed primarily with their problems in mind, but these standards are less puzzling to the women whose chief business is buying for a cafeteria or an institution, and who are acquainted with wholesale markets.

Hesitant judgment on the customer's part is replaced by certainty when marks, or labels, or certificates, can be used, for the device stays on or with the product until it reaches the customer and tells her the grade without any effort on her part. To be sure, workers who have examined closely into the matter say that many customers do not read the labels, but apparently the number who heed the labels is increasing among those who believe in getting their money's worth. The labels or devices do not need to supersede judgment - rather they can act as teachers, for by studying the characteristics they represent, the consumer should be the better prepared to use her own judgment on similar unlabeled products.

In answering queries, the Bureau of Agricultural Economics divides the list of standards of direct interest to consumers into two fairly well-defined groups. The first group includes those that can be readily used by the individual housekeeper under certain conditions, because of the device, or stamp, or certificate, or other visual indication of grade. The second group includes those that are so marked on some wholesale markets and can be used by consumers who buy in quantity on those markets.

In the first group are beef, lamb, veal, sausages and processed meats, poultry, eggs, butter, cheese, rice, honey, and certain canned fruits and vegetables. Canned chicken and other canned chicken products might be roughly included, since those put up by a large number of firms now bear labels denoting wholesomeness if not quality grade. The second group includes fresh fruits and vegetables, and dry beans. Containers for fruits and vegetables may be said to be in a class by themselves.

Meats

Much effort has been directed, by some meat specialists of the Bureau, to teaching housekeepers and other customers how to choose meats of good quality. Lectures, demonstrations, exhibits, pamphlets, and posters were used in this campaign. The interest of the housekeepers and their apparent need, with other factors, stimulated these men to develop a method by which housekeepers who are not apt pupils can now choose their cuts of beef with confidence. They devised a roller grading stamp, used with a harmless ink that usually disappears in cooking. This stamp is rolled over those parts of a carcass that later become retail cuts. The stamp repeats the class and grade names in such a way that they appear on each retail cut and thus give the customers information regarding the quality of the cut. (Fig. 1.) It is different from the purple stamp used in the Federal meat inspection work to show that the carcass has been inspected for diseased condition. This grading work takes place later and is an optional service. It is designed to aid in the merchandising of meats under exactly the true grade names so that when a housekeeper says she wants a Good grade roast or steak she can be sure of getting one of good quality. The service was developed with the millions of American housewives particularly in mind.

This meat-stamping service is available for U. S. Prime, U. S. Choice, U. S. Good, and U. S. Medium grade beef carcasses and wholesale cuts in Albany, Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Erie, Kansas City, Kingston, New York, Omaha, Philadelphia, Phoenix, San Francisco, Schenectady, Seattle, Sioux City, St. Louis, Washington, D.C., and Wichita. Anyone who calls for the service - slaughterer, packer, wholesaler, jobber, hotel or restaurant buyer, or retailer - can have it for a nominal charge - only a very small fraction of a cent per pound. This graded and stamped beef is available in any part of the United States in which the retailers order from slaughterers or dealers who make use of this service - a very wide area. Official graders in these cities will grade and stamp beef on the request of either sellers or buyers. The Bureau will stamp other classes and all grades whenever there is sufficient demand.

During the fiscal year 1935, more than 280,000,000 pounds of meat were graded and stamped for sale on the markets and for general commercial distribution as well as for Government, State, county, and city institutions. The meat-grading service is extensively used by such buyers as purchasers for hotels, restaurants, hospitals, steamship lines, and Pullman dining cars. It has been an important factor



BEEF GRADING AND STAMPING FOR CONSUMERS

**BASED ON U.S.
OFFICIAL STANDARDS**



THE STAMP IS PUT ON THE MEAT BY THE GOVERNMENT GRADER

THE GRADES NOW STAMPED FOR CONSUMERS ARE:

U.S. Prime

U.S. Good

U.S. Choice

U.S. Medium

U.S. Common (Plain)

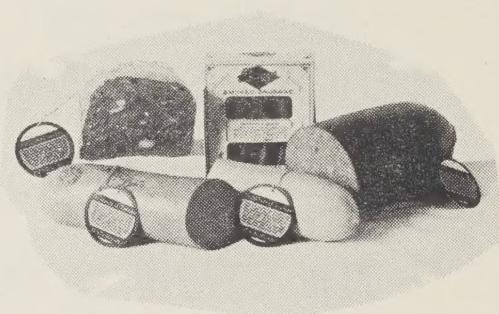
Factors that determine GRADE

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FIGURE 1

BAE

U.S. GRADES FOR PREPARED MEATS



**STANDARDS FOR
SAUSAGES AND
PROCESSED MEATS
INCLUDE:**

FRANKFURTERS
MEAT LOAF
BOLOGNA
HAMS
BACON
AND OTHER
PREPARED MEATS

The certificate of quality shows
the grade as determined by the
official grader.

QUALITY IS INDICATED BY:

Color

Firmness

Composition

Texture

Flavor

Condition

Aroma

Uniformity



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BUREAU OF AGRICULTURAL ECONOMICS**

in building up business in many restaurants and hotel dining rooms. In Omaha, Seattle, and Schenectady, for instance, practically every public dining room is using the stamped beef, lamb, and veal. The service is perhaps equally popular in St. Louis, Kansas City, Detroit, New York City, and other places.

The service is already liked by individual housekeepers, for they feel that the Government stamp is an accurate measure of quality and a safeguard against the sale of inferior meat at high prices. Some housekeepers are buying meat more freely as well as more confidently, now that it is federally stamped by U. S. grade; they say they feel sure of satisfying the family and of getting their money's worth at the same time. This increased buying exactly suits the meat dealers, so they are becoming more and more interested in Government stamping. Many who are selling U. S. stamped beef report a steadily increasing demand for beef of the higher grades.

Naturally dealers are not likely to change their places of buying unless they feel rather sure that the change will improve their business. If a dealer believes that his customers will not take an interest in the U. S. grade stamp or appreciate what it means, there is not much inducement to make a special effort to stock up with the stamped meat. But if customers ask for it, and continue to ask for it, most dealers will provide the kind of meat their customers want. So it is evident that just how available these Government stamped meats are to be in the local groceries, independent retail markets, and chain stores, largely depends upon the housekeepers themselves. Real demand is almost certain to bring a supply.

The lamb grading and stamping service, inaugurated in 1930, is available at all cities in which the beef-grading service is conducted. Three grades of lamb are stamped - U. S. Prime, U. S. Choice, and U. S. Good. During the fiscal year 1935, nearly 14,000,000 pounds of lamb were graded and stamped.

The veal grading and stamping service is conducted in the same cities. Four grades are stamped - U. S. Prime, U. S. Choics, U. S. Good, and U. S. Medium. About 2,400,000 pounds were stamped in the fiscal year 1935.

A similar service has recently been made available for processed meats including ham, sausage, bacon, frankfurters, bologna, meat loaf, and meat pudding. One grade, U. S. No. 1., is indicated by tag or label on the package or product. (Fig. 2.) The processed meats labeled last fiscal year totaled about 5,000,000 pounds and included only sausage graded and labeled from April 1935 through June 1935.

Poultry

Turkeys have been graded for the Thanksgiving and Christmas markets for 7 years. At first, they were marked by grade for the consumers, either by stamping each bird or by labeling it with a grade tag. The grading service has been given both at shipping points and at terminal markets. During the first few years the grading was done principally at terminal markets, but more recently it has been done largely at shipping points. At present, only a few turkeys are marked individually with a grade tag. Most turkeys are packed in boxes and each box is stamped with the U. S. grade of the turkeys it contains. Approximately 5,000,000 to 7,000,000 pounds are graded annually.

Other classes of poultry are graded by the Bureau at a number of poultry-packing plants in the Middle West. The boxes of poultry are stamped with the grade and the individual birds are not marked but in the near future probably increasing quantities of poultry will carry the U. S. grade marks or labels on the individual birds. About 5,000,000 pounds of poultry other than turkeys are graded annually at shipping points and the volume is rapidly increasing.

This Bureau has experimented to find the best way to mark individual poultry carcasses with the grade. At first the grade was stamped on the back of the bird and a tag was attached to one wing, giving the grade and other information. At present, two grades of poultry are marked, if any marking of the individual birds is done - U. S. Prime and U. S. Choice. The grade name is printed on a label or tag which is attached to the individual bird by means of a fastener that passes through the skin of the breast or wing. This fastener is so devised that it breaks when it is removed and therefore cannot be used again on another bird.

Eggs

Considerable work has been conducted by the Bureau in carrying the U. S. grades of eggs through to the consumer. This carrying is done by means of certificates of quality and seals which show the U. S. grade and the size of the eggs and which are used to seal the 1-dozen cartons in which the eggs are packed. Some 40 dealers have been authorized to use these certificates of quality and seals and approximately 4,000,000 dozens of eggs are so marketed annually. This work is carried on in widely scattered areas, including Los Angeles, San Francisco, Seattle, New York, Baltimore, and Washington, D. C. The consumers are apparently favorably inclined to the purchase of eggs plainly marked with the U. S. grades. The Bureau's experience in the use of the certificates of quality and seals indicates that the method has definite advantages in promoting the sale of eggs of good quality, as well as in protecting the consumer. (Fig. 3.)

Butter

A similar service is available for butter. Cartons of certain widely distributed brands of high-quality butter contain certificates of quality which show the grade of the butter as determined by an authorized representative of the U. S. Department of Agriculture. About 30 firms are authorized to use such certificates. Sales of butter with certificates of quality approximate 50,000,000 pounds each year. (Fig. 4.)

BAE

EGG GRADES IDENTIFIED BY LABEL FOR CONSUMERS

The seal shows the grade and date of grading on each carton



EGG GRADES BASED ON U.S. STANDARDS OF QUALITY SHOWN ON LABELS AS FOLLOWS:

- Retail Grade AA (U.S. Specials)**
- Retail Grade A (U.S. Extras)**
- Retail Grade B (U.S. Standards)**

Factors that determine QUALITY

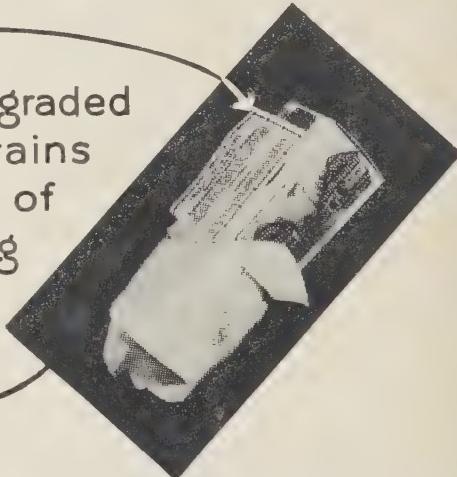
- | | |
|------------------------|-------------------------|
| 1. CONDITION OF WHITES | 4. SIZE OR WEIGHT |
| 2. CONDITION OF YOLK | 5. CLEANLINESS OF SHELL |
| 3. DEPTH OF AIR CELL | 6. SOUNDNESS OF SHELL |

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BUTTER GRADES-IDENTIFIED BY CERTIFICATE OF QUALITY FOR CONSUMERS

Officially graded butter contains a certificate of quality showing the grade or score



**CERTIFICATES OF QUALITY
ON BUTTER ARE LIMITED
TO 92 AND 93 SCORE**

Factors that determine **QUALITY** of butter

- | | |
|-----------|----------|
| 1. FLAVOR | 3. COLOR |
| 2. BODY | 4. SALT |

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Rice

Milled and brown rice can now be bought by Federal grade. To an increasing extent, retail packages are seen on the grocery shelves carrying these grade names although all of the labels do not use the "U. S." before the grade name.

Honey

To a limited extent and chiefly in the Central West consumers can now find "U. S. No. 1" or "U. S. Fancy" stamped on containers of comb honey in retail stores. The stamping is usually done on the cellophane wrapping. In Ohio approximately 20 percent of all comb honey offered in individual sections is stamped U. S. No. 1. Relatively little extracted honey is sold with U. S. grade terms stamped on the bottle or small cans. The wooden cases in which the extracted honey is packed are sometimes so stamped, and a very few individual beekeepers and bottlers place U. S. grade stamps on 5 and 10 pound pails and glass jars.

Canned Fruits and Vegetables

Simple grade terminology ("Grade A", "Grade B", etc.) appears in the grades for canned fruits and vegetables developed by the Bureau. These grades are now used in connection with the inspection and grading of canned fruits and vegetables under the Farm Products Grading law and the United States Warehouse Act.

The simplicity of the nomenclature and the fact that the grades have been widely and successfully used as the basis for the determination of collateral values have led some to the belief that the grades afford acceptable nomenclature for use on labels. A few canners are now labeling their products with these terms in order that the consumer may be apprised of the quality of merchandise in the can. (Fig. 5.)

The Bureau feels that informative labeling is particularly desirable as it enables the consumer to make selections actually on the basis of the quality preferred. In general, Grade A represents the finest, most succulent vegetables. Grade B vegetables may not be quite so tender and succulent, but may be termed the general utility grade and will be found very satisfactory for use in the average household. Grade C merchandise will be found to be wholesome food and has a definite use in the average household. For example, Grade A canned corn is very generally used as a side dish, Grade B may be used for making of pudding and casserole dishes, and Grade C canned corn furnishes the basis for excellent soup. The Bureau feels that housewives will do well to insist on buying merchandise on which the grade is indicated in the simple terms suggested herein.

Grades have been developed either in tentative or in recommended form for the following commodities: Apple sauce, beets, carrots, red sour pitted cherries, corn (cream style), corn (whole grain style), dry beans, grapefruit, lima beans, mushrooms, peaches, peas, pumpkin (squash), sauerkraut, snap beans, spinach, succotash, tomatoes, tomato catchup, tomato juice, and tomato pulp. (Fig. 6.)

Canned Chicken and Chicken Products

A service that the Bureau conducts for canners of chicken and chicken products (such as chicken soup, chicken broth, and boneless chicken) has to do with the condition and wholesomeness of the poultry used rather than its commercial grade or quality, but the work is closely related to the grading work. The label, used on canned chicken products that are prepared under supervision of the Bureau, has an inspection legend printed on it which shows that the chicken used in the product has been inspected and certified by the Bureau. Qualified veterinary inspectors examine all carcasses thoroughly and reject all that are unwholesome. This service was inaugurated at the request of the canners and approximately 20 firms located in Massachusetts, New York, Pennsylvania, New Jersey, Delaware, Indiana, Illinois, Minnesota, and Washington now use it. Approximately 1,500,000 pounds of poultry are inspected monthly. These labeled goods are widely distributed, so that housekeepers in any of the larger cities and in many of the smaller towns should be able to obtain these Government-inspected products. (Fig. 7.)

Fresh Fruits and Vegetables

Coming now to the second group of products, the Bureau has worked out standards for practically all fruits and vegetables and each year a larger quantity is sold under these grades. It is estimated that 80 percent of the commercial potato crop is so sold. Large quantities of apples are sold under grade, and so on, in decreasing proportion, down to the minor products, like shallots and chicory. But as a rule these grades and their designations are not as yet carrying through to the retail markets, because the producer does not mark the grade on the container or because the dealer who has bought the commodity by the U. S. grade may discard the part of the container that bears the mark.

On most of the markets, many buyers who purchase wholesale containers of potatoes, apples, and other fruits and vegetables are now asking for United States grades, and are frequently finding the grade marks when they look or ask for them. The more they ask the more they will find them. An increased and consistent demand may mean that dealers on the wholesale markets will feature the U. S. grade mark.

As these grades were designed primarily for the wholesale trade the report of a recent informal demonstration may be useful. An inspector examined a bag of U. S. No. 1 potatoes and showed how and why it had been so designated. He explained that the grade allows for a certain number of small and defective specimens such as would usually grade U. S. No. 2, for the grading must be done quickly as the tubers pass before the grader on a moving belt; that through oversight and some error of judgment, a few No. 2 potatoes will inevitably slip by. He found that the number of undesirable tubers in the bag did not exceed the number allowed. He explained that the retailer, who would normally buy this bag, might sort out the potatoes into more closely uniform lots if he had an exacting class of customers. For a wholesale grade some dust on the potato or in the bag is allowable, he explained, for

BAE

OFFICIAL U.S. GRADES FOR CANNED FRUITS AND VEGETABLES



U.S. GRADE A (FANCY)



U.S. GRADE B (EX. STANDARD)



U.S. GRADE C (STANDARD)

QUALITY FACTORS ARE:

1. PERCENTAGE OF WHOLE TOMATOES
2. DRAINED WEIGHT
3. COLOR
4. ABSENCE OF DEFECTS
5. FLAVOR

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U.S. GRADES OF CANNED FRUITS AND VEGETABLES LABELED FOR CONSUMERS



LOOK FOR
THE GRADE SYMBOL
AND SUPPLEMENTARY
DESCRIPTIVE TERMS
ON THE LABEL

GRADE SYMBOLS ASSIST CONSUMERS IN SELECTING
HIGH QUALITY CANNED FRUITS AND VEGETABLES

U.S. DEPARTMENT OF AGRICULTURE
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with such a cheap commodity as potatoes the grader cannot now be expected to grade very closely or to clean each potato. Many shippers believe that to take the time and trouble to put up bags of perfectly clean potatoes running absolutely close to the median of the grade would necessarily make U. S. No. 1 potatoes so expensive that the work would not be justified.

Quality factors, like size and color, do not change after grading and packing, whereas condition factors like ripeness and decay may change materially during transit or storage period. The more perishable fruits and vegetables, like peaches and spinach, change in condition from day to day and almost from hour to hour, especially if they are handled frequently. The storekeeper would have to handle them frequently if he were to try to keep each unit within a specified grade, for peaches that are U. S. Fancy in the morning may be spotted with decay by late afternoon. The present grades for these perishables are based on the factors of (1) variety, (2) quality (such as under-maturity, general appearance, shape, color, and relative freedom from the defects that cause waste or unreasonable deterioration), and (3), usually, size.

Considering these and other facts, specialists in fruits and vegetables believe that in general the greatest improvement can be brought about by improving the quality of the products shipped to market. They are concentrating their activities on grading and standardization work at producing centers. Such work, based on systematic studies of consumer preferences, is slowly revolutionizing the character of the trade in perishables, although the improvements are in forms that housekeepers are not likely to recognize. Yearly the housekeepers get better produce for every dollar spent for it.

Dry Beans

Standards have been worked out for all commercial classes of dry edible beans, and these standards are used to a considerable extent in the trade. Some retailers are getting beans under these grade names and indications are that many more retailers will soon handle them by the grade. Therefore consumers might well begin to ask for beans in that way.

Containers

In one important line, standardization work is done permanently and the customer can put further care on that score behind her. In 1913, when standardization work on firm products was making a good start, the Bureau had constant queries, from housekeepers and from elements in the trade, as to whether anything could be done to eliminate the nuisance of "snide" berry and fruit boxes. Frequently when they emptied out a berry box, the housekeepers complained, they found the bottom set high in the box, and similar practices deprived them of their rightful quantity of other small fruits.

Several years ago, Congress passed a standard container law which prescribed the sizes for baskets for small fruits and vegetables in interstate trade. More than 12 sizes of grape baskets were reduced to 3 and

more than 33 sizes of berry boxes and till baskets were replaced by 6 common sizes. Later another law was passed which standardized hampers, round stave baskets, and market or splint baskets. Nine sizes of hampers, for instance, now replace about 50 styles and sizes. Formerly when a house-keeper bought a hamper of vegetables she did not know whether she was getting a full bushel or seven-eights of a bushel, for the same price was usually paid regardless of the size of the so-called bushel hamper and the difference in size was not evident. Market baskets, used in selling many commodities on some markets, varied widely in capacity and style but it was difficult to detect discrepancies by eye. The same styles are now allowed, but they must conform to 6 specified sizes in capacity.

These standard sizes, once set, have met with almost universal favor. Enforcing the standard container laws has been largely a work of education and of servicing manufacturers' operations by seasonal tests of their containers.

Crates and boxes - including cartons for fruits and vegetables - are still unregulated as to sizes in spite of the fact that cartons are becoming increasingly important and diversified.

In Conclusion

Specifications or descriptions of the grades of almost any farm product will be sent by the Bureau of Agricultural Economics to any consumer who writes for them and who designates the specific commodities in which she is interested. Some specifications that may be unsuitable for her use may still be suggestive of things to look out for when buying. For instance, a careful housekeeper would glean some useful information and some practical hints from the study of the Bureau standards for any meats, especially if she can compare the printed specifications with the labeled meat.

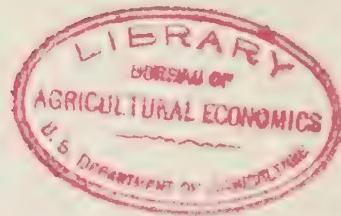
Huge sums are spent by many large growers' organizations and many large firms in retail store work. Through displays, folders, and labels, they are bringing the consumers much information that works to the advantage of all. Government grades are increasingly recognized as one means of carrying on such work. Some leaders in the Federal standardization work believe that eventually many of the U. S. grades will be carried to consumers chiefly through these large distributors and advertisers. Demand from the consuming end will do much to encourage such a development. Many cooperative growers' organizations and firms do not now see how they can profitably relate their brands closely with the official grades but there are signs that such a development may be coming.

Development of grades on which individual consumers can buy is an important element in the future standardization program. Many consumers need and want these grades. Their demands must be met and other consumers must be reached, for until the individual consumers think in terms of qualities, and buy on the basis of grades that signify quality, there cannot be the most sensitive adjustment of price to quality.

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Black-and-white posters $10\frac{1}{2}$ x 16 inches in size are available free, for educational purposes.

THE CONSUMER AND THE STANDARDIZATION OF FARM PRODUCTS

- - - - -

By Caroline B. Sherman, Agricultural Economist

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Meats

Much effort was directed by some meat specialists of the Bureau in earlier years to teaching housekeepers and other customers how to choose meats of good quality. Lectures, demonstrations, exhibits, pamphlets, and posters were used. The interest of housekeepers and their apparent need, together with other considerations, stimulated these men to develop a method by which housekeepers who are not expert judges of meat can now choose their cuts of beef with confidence. They devised a roller stamp, used with a harmless branding fluid that usually disappears during cooking. This stamp is rolled over those parts of a carcass that later become retail cuts. The stamp repeats the class and grade names in such a way that they appear on the principal retail cuts and so give the customers information regarding the quality of the cut. (Fig.1.)

This is different from the round purple stamp used in Federal meat inspection work to show that the carcass has been inspected for diseased condition. This grading work takes place later and is an optional service, designed to aid in the merchandising of meats under exact and true grade names, enabling the housekeeper when she wants a Good grade roast or steak, to be sure of obtaining that quality. The service was developed with the millions of American housewives particularly in mind.

This meat-stamping service is available for U.S.Prime, U.S.Choice, U.S.Good, U.S.Medium, and U.S.Plain grade beef carcasses and wholesale cuts. It is available in Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Columbus, *Dayton, Denver, Detroit, *Dubuque, *Erie, *Hoboken, *Jersey City, Kansas City, Los Angeles, Memphis, *Milwaukee, *Newark, *San Diego, St. Louis, Mo., and E.St.Louis, Ill., Greater New York, Omaha, Philadelphia, Phoenix, *Piqua, Ohio, *Sandusky, San Francisco, Seattle, *St. Joseph, St. Paul(and Minneapolis), *Toledo, *Topeka, *Waterloo, Wheeling, and Washington, D. C. Anyone who requests the service - slaughterer, packer, wholesaler, jobber, hotel or restaurant buyer, or retailer - can have it for the nominal charge amounting to only a very small fraction of a cent per pound. This graded and stamped beef is available in any part of the United States in which the retailers order from slaughterers or dealers who make use of this service. Official graders in these cities will grade and stamp beef, lamb, manufactured meat products, or in fact any eligible meat or meat food product on request of either buyers or sellers.

* Points reached from nearest official grading station where graders are regularly stationed.

BAE

BEEF GRADING AND STAMPING FOR CONSUMERS

BASED ON U.S.
OFFICIAL STANDARDS



THE STAMP IS PUT
ON THE MEAT BY THE
GOVERNMENT GRADER

THE GRADES NOW STAMPED FOR CONSUMERS ARE:

U.S. Prime

U.S. Good

U.S. Choice

U.S. Medium

U.S. Common (Plain)

Factors that determine **GRADE**

- 1. CONFORMATION
- 2. FINISH
- 3. QUALITY

**U.S. DEPARTMENT OF AGRICULTURE
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FIGURE 1



U.S. GRADES FOR PREPARED MEATS



STANDARDS FOR
SAUSAGES AND
PROCESSED MEATS
INCLUDE:

FRANKFURTERS
MEAT LOAF
BOLOGNA
HAMS
BACON
AND OTHER
PREPARED MEATS

The certificate of quality shows
the grade as determined by the
official grader.

QUALITY IS INDICATED BY:

Color

Firmness

Composition

Texture

Flavor

Condition

Aroma

Uniformity



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The Good and Medium grades of beef are here considered briefly as an example. The U. S. Good grade of steer and heifer beef represents the average quality generally sold in retail markets. It is considered a grade between high and low quality and is popular with many consumers who like to buy fairly lean beef that has good "eating qualities" but that is relatively moderate in cost.

The U. S. Medium grade steer and heifer beef, one grade lower than U. S. Good, meets a demand from those who want to buy leaner and lower priced beef of fair eating qualities.

As shown in figure 1, the factors that determine the grade are conformation, finish, and quality. They are here translated into customer language for these two grades of beef:

In U. S. Good Steer and Heifer beef the rounds are reasonably thick and heavily muscled. Loins, ribs, and other cuts are moderately full and plump but somewhat less so than is true of the higher grades. The fat covering extends well over the outside surfaces and generally is firm and smooth, but it may be a little uneven over the loins, ribs, and some other cuts. The neck, the small end of the round, and the fore shank may have little fat covering. The interior fat, including the kidney fat, is usually moderate in supply or may be slightly excessive. The inside of the ribs usually shows only moderate fat covering and there may be lean strips between them. The fats are usually reasonably firm, and are white to creamy white, but they may be a little soft and of a yellowish tinge. The flesh generally is moderately firm but may be a little soft. The color may range from a light cherry red to a slightly darker red. The intermixture of fat through the lean muscles (the marbling) is generally moderate but should be evident to a noticeable extent in the thicker cuts.

In U. S. Medium Steer and Heifer beef the loins, ribs, and other cuts are usually somewhat flat and lack a high degree of thickness or plumpness. The fat covering over the loins and ribs is fair but is usually relatively thin; the neck, small end of the round, and other parts may have almost no fat covering. There is usually a fair amount of kidney fat and other interior fats. In many cases the fat is reasonably firm and creamy white but it may be soft and of a yellowish tint. There is very little if any fat covering on the inside of the ribs and lean streaks between them are usual. The flesh is usually somewhat soft and although it may be fairly bright red in color it is generally rather dark. There is little or no observable intermixture of fat (marbling) even in the heavier muscles.

During the fiscal year ended June 30, 1938, more than 496,000,000 pounds of beef were graded and stamped for sale on the markets and for general commercial distribution as well as for Government, State, county and city institutions. The meat grading service is used extensively by purchasers for hotels, restaurants, hospitals, steamship lines, and Pullman dining cars. It has been an important factor in building up business in many restaurants and hotel dining rooms. In Omaha, for instance,

practically every public dining room is using U. S. stamped beef, lamb, and veal; and in Seattle, a city ordinance provides that all beef, lamb, and mutton sold within the city must be graded and identified according to the Official Standards of the U. S. Department of Agriculture under the supervision of an official grader of this Bureau. The service is perhaps equally popular in St. Louis, Kansas City, Detroit, Chicago, New York City, and other places.

The service is already appreciated by individual housekeepers, for they feel that the Government stamp is not only an indication of quality but a safeguard against the sale of inferior meat at high prices. Now that meat so identified is available, some consumers are buying meat more freely and with confidence. They say they can at the same time satisfy the family and get their money's worth. This increased buying has in turn brought about more interest in the service. Many wholesale and retail meat dealers who are selling U. S. stamped beef report a steadily increasing demand for beef in the higher grades.

Naturally dealers are not likely to change their plan of buying unless they believe the change will improve their business. If a dealer believes his customers will not appreciate what the U. S. grade stamp means there is not much inducement to make a special effort to stock up with stamped meat. But if customers ask for it, and continue to ask for it, most dealers will provide the kind of meats their customers want. So it is evident that just how available Federally graded and stamped meats are to be in local groceries, independent retail markets, and chain stores depends largely upon the housekeepers. Real demand is almost certain to bring a supply.

The lamb grading and stamping service, begun in 1930, is available at all cities in which the beef grading service is conducted. Five grades of lamb are stamped: U.S.Prime, U.S.Choice, U.S.Good, U.S.Medium, and U.S.Plain. During the fiscal year ended June 30, 1938 over 26,000,000 pounds of lamb were graded and stamped.

The veal grading and stamping service is conducted in the same cities. Five grades are stamped: U.S.Prime, U.S.Choice, U.S.Good, U.S.Medium, and U.S.Plain. More than 6,000,000 pounds were graded and stamped during the fiscal year ended June 30, 1938.

A similar service is available for processed meats, including frankfurters, bologna, liver sausage, and meat loaf and other sausage products as well as ham, bacon, and similar processed pork. So far only one grade, U.S.No. 1, is offered for grading by processors. The grade is indicated by tag or label on the product or its immediate container. (Fig.2) The processed meats so labeled during the year ended June 30, 1938 totaled more than 38,000,000 pounds.

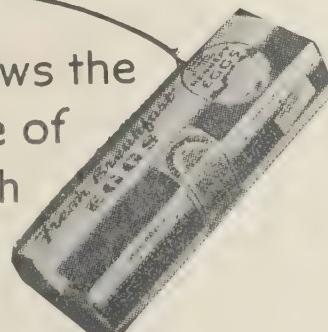
A total of more than 604,000,000 pounds of meats of various kinds was labeled and stamped by Government graders during the 1938 fiscal year.

BAE

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EGG GRADES IDENTIFIED BY LABEL FOR CONSUMERS

The seal shows the grade and date of grading on each carton



EGG GRADES BASED ON U. S. STANDARDS OF
QUALITY SHOWN ON LABELS AS FOLLOWS:

Retail Grade AA (U. S. Specials)

Retail Grade A (U. S. Extras)

Retail Grade B (U. S. Standards)

Factors that determine QUALITY

- | | |
|------------------------|-------------------------|
| 1. CONDITION OF WHITES | 4. SIZE OR WEIGHT |
| 2. CONDITION OF YOLK | 5. CLEANLINESS OF SHELL |
| 3. DEPTH OF AIR CELL | 6. SOUNDNESS OF SHELL |

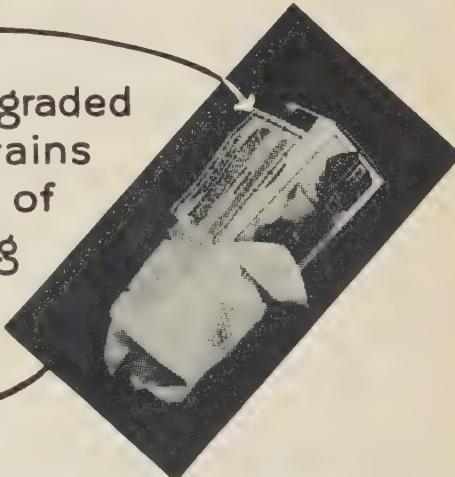
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FIGURE 3



BUTTER GRADES-IDENTIFIED By CERTIFICATE OF QUALITY FOR CONSUMERS

Officially graded butter contains a certificate of quality showing the grade or score



**CERTIFICATES OF QUALITY
ON BUTTER ARE LIMITED
TO 92 AND 93 SCORE**

Factors that determine **QUALITY** of butter

- | | |
|------------------|-----------------|
| 1. FLAVOR | 3. COLOR |
| 2. BODY | 4. SALT |

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Poultry

Turkeys have been graded for the Thanksgiving and Christmas markets for 9 years. At first, they were marked by grade for the consumers, either by stamping each bird or by labeling it with a grade tag. The grading service has been given both at shipping points and at terminal markets. During the first few years the grading was done principally at terminal markets but more recently it has been done largely at shipping points. At present, only a few turkeys are marked individually with a grade tag. Most turkeys are packed in boxes and each box is stamped with the U. S. grade of the turkeys it contains. Approximately 25,000,000 pounds are graded annually.

Other classes of poultry are graded by the Bureau at a number of poultry-packing plants in the Middle West. The boxes of poultry are stamped with the grade and the individual birds are not marked but in the near future probably increasing quantities of poultry will carry the U. S. grade marks or labels on the individual birds. About 5,000,000 pounds of poultry other than turkeys are graded annually at shipping points and the volume is rapidly increasing.

This Bureau has experimented to find the best way to mark individual poultry carcasses with the grade. At first the grade was stamped on the back of the bird and a tag was attached to one wing, giving the grade and other information. At present, two grades of poultry are marked, if any marking of the individual birds is done - U. S. Prime and U. S. Choice. The grade name is printed on a label or tag which is attached to the individual bird by means of a fastener that passes through the skin of the breast or wing. This fastener is so devised that it breaks when it is removed and therefore cannot be used again on another bird. Full drawn poultry carcasses that are graded are often wrapped in cellophane on which is printed the U. S. Grades and the inspection legend of the Bureau.

Eggs

Considerable work has been conducted by the Bureau in carrying the U. S. grades of eggs through to the consumer. This carrying is done by means of certificates of quality and seals which show the U. S. grade and the size of the eggs and which are used to seal the 1-dozen cartons in which the eggs are packed. Some 69 dealers have been authorized to use these certificates of quality and seals and approximately 9,000,000 dozens of eggs are so marketed annually. This work is carried on in widely scattered areas, including Los Angeles, San Francisco, Seattle, New York, Cleveland, Chicago, Baltimore, Boston, St. Louis, and Washington, D. C. The consumers are apparently favorably inclined to the purchase of eggs plainly marked with the U. S. grades. The Bureau's experience in the use of the certificates of quality and seals indicates that the method has definite advantages in promoting the sale of eggs of good quality, as well as in protecting the consumer. (Fig. 3.)

Butter

A similar service is available for butter. Cartons of certain widely distributed brands of high-quality butter contain certificates of quality which show the grade of the butter as determined by an authorized representative of the U. S. Department of Agriculture. About 100 firms are authorized to use such certificates. Sales of butter with certificates of quality approximate 80,000,000 pounds each year. (Fig. 4.)

Rice

Milled and brown rice can now be bought by Federal grade. To an increasing extent, retail packages are seen on the grocery shelves carrying these grade names although all of the labels do not use the "U. S." before the grade name.

Honey

To a limited extent and chiefly in the Central West consumers can now find U. S. No. 1 or U. S. Fancy stamped on containers of comb honey in retail stores. The stamping is usually done on the cellophane wrapping. In Ohio approximately 20 percent of all comb honey offered in individual sections is stamped U. S. No. 1. Relatively little extracted honey is sold with U. S. grade terms stamped on the bottle or small cans. The wooden cases in which the extracted honey is packed are sometimes so stamped, and a very few individual beekeepers and bottlers place U. S. grade stamps on 5 and 10 pound pails and glass jars.

Canned Fruits and Vegetables

Simple grade terminology (Grade A, Grade B, etc.) appears in the grades for canned fruits and vegetables developed by the Bureau. These grades are now used in connection with the inspection and grading of canned fruits and vegetables under the Farm Products Grading law and the United States Warehouse Act.

The simplicity of the nomenclature and the fact that the grades have been widely and successfully used as the basis for the determination of collateral values have led some to the belief that the grades afford acceptable nomenclature for use on labels. A few canners are now labeling their products with these terms in order that the consumer may be apprised of the quality of merchandise in the can. (Fig. 5.)

The Bureau feels that informative labeling is particularly desirable as it enables the consumer to make selections actually on the basis of the quality preferred. In general, Grade A represents the finest, most succulent vegetables. Grade B vegetables may not be quite so tender and succulent, but may be termed the general utility grade and will be found very satisfactory for use in the average household. Grade C merchandise will be found to be wholesome food and has a definite use in the average household. For example, Grade A canned corn is very generally used as a side dish, Grade B may be used for making of pudding and casserole

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OFFICIAL U.S. GRADES FOR CANNED FRUITS AND VEGETABLES



U.S. GRADE A (FANCY)



U.S. GRADE B (EX. STANDARD)



U.S. GRADE C (STANDARD)

QUALITY FACTORS ARE:

1. PERCENTAGE OF WHOLE TOMATOES
2. DRAINED WEIGHT
3. COLOR
4. ABSENCE OF DEFECTS
5. FLAVOR

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U.S. GRADES OF CANNED FRUITS AND VEGETABLES LABELED FOR CONSUMERS



LOOK FOR
THE GRADE SYMBOL
AND SUPPLEMENTARY
DESCRIPTIVE TERMS
ON THE LABEL

GRADE SYMBOLS ASSIST CONSUMERS IN SELECTING
HIGH QUALITY CANNED FRUITS AND VEGETABLES

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dishes, and Grade C canned corn furnishes the basis for excellent soup.

In the cream-style canned corn the U. S. Grade A product will be prepared from young tender sweet corn. It will be bright and have a heavy creamlike consistency and will be practically free from such defects as silks, husks, and off-colored kernels. The canned corn of the U. S. Grade C will be prepared from only reasonably tender sweet corn, the color may be dull, the consistency may be somewhat thin or may be somewhat thick indicating an insufficiency of moisture. The product is fairly free of silks and husks.

The Bureau feels that housewives will do well to insist on buying merchandise on which the grade is indicated in the simple terms suggested herein.

Grades have been developed either in tentative or in recommended form for the following commodities: apples, apple sauce, apricots, asparagus, beets, carrots, red sour pitted cherries, sweet cherries, corn (cream style), corn (whole grain style), dry beans, grapefruit, grapefruit juice, lima beans, mushrooms, okra, peaches, pears, peas, pimientos, plums and prunes, pumpkin (squash), sauerkraut, snap beans, spinach, sweetpotatoes, succotash, tomatoes, tomato catchup, tomato juice, and tomato pulp. (Fig. 6.)

Canned Chicken and Chicken Products

A service that the Bureau conducts for canners of chicken and chicken products (such as chicken soup, chicken broth, and boneless chicken) has to do with the condition and wholesomeness of the poultry used rather than its commercial grade or quality, but the work is closely related to the grading work. The label, used on canned chicken products that are prepared under supervision of the Bureau, has an inspection legend printed on it which shows that the chicken used in the product has been inspected and certified by the Bureau. Qualified veterinary inspectors examine all carcasses thoroughly and reject all that are unwholesome. This service was inaugurated at the request of the canners and approximately 20 firms located in Massachusetts, New York, Pennsylvania, New Jersey, Delaware, Indiana, Illinois, Iowa, Minnesota, Missouri and Washington now use it. Approximately 3,000,000 pounds of poultry are inspected monthly. These labeled goods are widely distributed, so that housekeepers in any of the larger cities and in many of the smaller towns should be able to obtain these Government-inspected products.

Fresh Fruits and Vegetables

Coming now to the second group of products, the Bureau has worked out standards for practically all fruits and vegetables and each year a larger quantity is sold under these grades. It is estimated that 80 percent of the commercial potato crop is so sold. Large quantities of apples are sold under grade, and so on, in decreasing proportion, down to the minor products, like shallots and chicory. But as a rule these grades and their designations are not as yet carrying through to the retail markets, because the producer does not mark the grade on the container or because the dealer who has bought the commodity by the U. S. grade may discard the part of the container that bears the mark.

On most of the markets, many buyers who purchase wholesale containers of potatoes, apples, and other fruits and vegetables are now asking for United States grades, and are frequently finding the grade marks when they look or ask for them. The more they ask the more they will find them. An increased and consistent demand may mean that dealers on the wholesale markets will feature the U. S. grade mark.

As these grades were designed primarily for the wholesale trade the report of a recent informal demonstration may be useful. An inspector examined a bag of U. S. No. 1 potatoes and showed how and why it had been so designated. He explained that the grade allows for a certain number of small and defective specimens such as would usually grade U. S. No. 2, for the grading must be done quickly as the tubers pass before the grader on a moving belt; that through oversight and some error of judgment, a few No. 2 potatoes will inevitably slip by. He found that the number of undesirable tubers in the bag did not exceed the number allowed. He explained that the retailer, who would normally buy this bag, might sort out the potatoes into more closely uniform lots if he had an exacting class of customers. For a wholesale grade some dust on the potato or in the bag is allowable, he explained, for with such a cheap commodity as potatoes the grader cannot now be expected to grade very closely or to clean each potato. Many shippers believe that to take the time and trouble to put up bags of perfectly clean potatoes running absolutely close to the median of the grade would necessarily make U. S. No. 1 potatoes so expensive that the work would not be justified.

Quality factors, like size and color, do not change after grading and packing. Other factors that do not change after packing and upon which grades are primarily based are: under-maturity, shape, and relative freedom from defects that cause unreasonable waste. Condition factors like ripeness and decay may change materially during transit or storage period. The more perishable fruits and vegetables, like peaches and spinach, change in condition from day to day and almost from hour to hour, especially if they are handled frequently by prospective purchasers. The storekeeper would have to sort them frequently if he were to try to keep each unit within a specified grade, for peaches that are U. S. Fancy in the morning may be spotted with decay in late afternoon.

Considering these and other facts, specialists in fruits and vegetables believe that in general the greatest improvement can be brought about by improving the quality of the products shipped to market. They are concentrating their activities on grading and standardization work at producing centers. Such work, based on systematic studies of consumer preferences, is slowly revolutionizing the character of the trade in perishables, although the improvements are in forms that housekeepers are not likely to recognize. Yearly the housekeepers get better produce for every dollar spent for it.

Dry Beans

Standards have been worked out for all commercial classes of dry edible beans, and these standards are used to a considerable extent in the trade. Some retailers are getting beans under these grade names and indications are that many more retailers will soon handle them by the grade. Therefore consumers might well begin to ask for beans in that way.

Containers

In one important line, standardization work is done permanently and the customer can put further care on that score behind her. In 1913, when standardization work on farm products was making a good start, the Bureau had constant queries, from housekeepers and from elements in the trade, as to whether anything could be done to eliminate the nuisance of "snide" berry and fruit boxes. Frequently when they emptied out a berry box, the housekeepers complained, they found the bottom set high in the box, and similar practices deprived them of their rightful quantity of other small fruits.

Several years ago, Congress passed a standard container law which prescribed the sizes for baskets for small fruits and vegetables in interstate trade. More than 12 sizes of grape baskets were reduced to 3 and more than 33 sizes of berry boxes and till baskets were replaced by 6 common sizes. Later another law was passed which standardized hampers, round stave baskets, and market or splint baskets. Nine sizes of hampers, for instance, now replace about 50 styles and sizes. Formerly when a housekeeper bought a hamper of vegetables she did not know whether she was getting a full bushel or seven-eights of a bushel, for the same price was usually paid regardless of the size of the so-called bushel hamper and the difference in size was not evident. Market baskets, used in selling many commodities on some markets, varied widely in capacity and style but it was difficult to detect discrepancies by eye. The same styles are now allowed, but they must conform to 6 specified sizes in capacity.

These standard sizes, once set, have met with almost universal favor. Enforcing the standard container laws has been largely a work of education and of servicing manufacturers' operations by seasonal tests of their containers.

Crates and boxes - including cartons for fruits and vegetables - are still unregulated as to sizes in spite of the fact that cartons are becoming increasingly important and diversified.

In Conclusion

Specifications or descriptions of the grades of almost any farm product will be sent by the Bureau of Agricultural Economics to any consumer who writes for them and who designates the specific commodities in which she is interested. Some specifications that may be unsuitable for her use may still be suggestive of things to look out for when buying. For instance, a careful housekeeper would glean some useful information and some practical hints from the study of the Bureau standards for any

meats, especially if she can compare the printed specifications with the labeled meat.

Huge sums are spent by many large growers' organizations and many large firms in retail store work. Through displays, folders, and labels, they are bringing the consumers much information that works to the advantage of all. Government grades are increasingly recognized as one means of carrying on such work. Some leaders in the Federal standardization work believe that eventually many of the U. S. grades will be carried to consumers chiefly through these large distributors and advertisers. Demand from the consuming end will do much to encourage such a development. Many cooperative growers' organizations and firms do not now see how they can profitably relate their brands closely with the official grades but there are signs that such a development may be coming.

Development of grades on which individual consumers can buy is an important element in the future standardization program. Many consumers need and want these grades. Their demands must be met and other consumers must be reached, for until the individual consumers think in terms of qualities, and buy on the basis of grades that signify quality, there cannot be the most sensitive adjustment of price to quality.

